

What is claimed is:

1. A zoom lens comprising:

a first lens unit having a negative refractive power; and
an aperture stop disposed on an image side of the first lens
unit,

5 wherein the first lens unit has, on a most object side, an
optical element having a reflecting surface to fold a path of rays,
and is fixed in a magnification change,

wherein a position of the aperture stop is fixed in reference
to an image surface in the magnification change, and

10 wherein an ray-entering surface of the optical element has
an aspherical surface concave toward an object side that exerts
a weaker power for divergence at a position thereon father from
an optical axis.

2. A zoom lens according to claim 1, comprising a second lens
unit having a positive refractive power disposed between the first
lens unit and the aperture stop, wherein, in a magnification change
from a wide-angle end to a telephoto end under a condition where
5 an object point at an infinite distance is in focus, the second
lens unit shifts only in one direction and satisfies the following
condition:

$$0.45 < \log \gamma_B / \log \gamma < 0.85$$

where f_T is a focal length of an entire system of the zoom lens
10 at the telephoto end, f_W is a focal length of the entire system
of the zoom lens at the wide-angle end, $\gamma = f_T/f_W$, and γ_B is a
magnification of the lens unit G2 at the telephoto end divided
by a magnification of the lens unit G2 at the wide-angle end.

3. A zoom lens according to claim 2, comprising, in order from the aperture stop toward the image side, a third lens unit having a negative refractive power and a fourth lens unit having a positive refractive power, wherein the third lens unit and the fourth lens unit are arranged adjacent to one another, and, in a magnification change from the wide-angle end to the telephoto end under a condition where an object point at an infinite distance is in focus, a distance between the third lens unit and the fourth lens unit is smaller at the telephoto end than at the wide-angle end.

4. A zoom lens according to claim 3, wherein, in the magnification change from the wide-angle end to the telephoto end under the condition where the object point at an infinite distance is in focus, a position of the fourth lens unit is more image-side at the telephoto end than at the wide-angle end.

5. A zoom lens according to claim 1, comprising a lens unit that is disposed on an image side of the aperture stop and that performs focusing.

6. A zoom lens according to claim 1, comprising a lens unit that has a positive refractive power and that has an aspherical surface.

7. A zoom lens according to claim 1, comprising a lens unit that has a positive refractive power and that includes a cemented lens component.

8. A zoom lens according to claim 7, wherein the lens unit consists of the cemented lens component.

9. A zoom lens according to claim 1, satisfying the following condition:

$$0.45 < e/L < 1.2$$

where L is a diagonal length of an effective image pickup region
5 of an image pickup element, and e is an equivalent length in air to a length measured along an optical axis from a ray-entering surface to a ray-exiting surface of the optical element.

10. A zoom lens according to claim 1, wherein the optical element is a prism and satisfies the following condition:

$$1.45 < n_{pri}$$

where n_{pri} is a refractive index for d-line rays of a medium of
5 the prism.

11. A zoom lens according to claim 1, further comprising a second lens unit and satisfying the following condition:

$$0.85 < -\beta_{Rt} < 2.0$$

where β_{Rt} is a compound magnification of an optical system formed
5 of the second lens unit and components arranged thereafter under a condition where an object at an infinite distance is in focus at a telephoto end.

12. A zoom lens according to claim 1, further comprising a second lens unit and a third lens unit and satisfying the following conditions:

$$0.2 < -M_3/M_2 < 0.75$$

5 where M_2 is an amount of shift of the second lens unit in a magnification change from a wide-angle end to a telephoto end under a condition where an object point at an infinite distance is in focus, and M_3 is an amount of shift of the third lens unit in a magnification change from the wide-angle end to the telephoto end
10 under the condition where an object point at an infinite distance is in focus.

13. A zoom lens according to claim 1, further comprising a lens subunit and satisfying the following condition:

$$0 < f_{11}/f_{12} < 1.6$$

where f_{11} is a focal length of the prism in the first lens unit,
5 and f_{12} is a focal length of the lens subunit.

14. A zoom lens according to claim 1, having an optical member or an optical thin film that satisfies the following conditions:

$$\tau_{600}/\tau_{550} \geq 0.8$$

$$\tau_{700}/\tau_{550} \leq 0.08$$

5 where τ_{550} is a transmittance of the optical member or optical thin film at the wavelength 550nm, τ_{600} is a transmittance of the optical member or optical thin film at the wavelength 600nm, and τ_{700} is a transmittance of the optical member or optical thin film at the wavelength 700nm.
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15. A zoom lens according to claim 1, having an optical member or an optical thin film that satisfies the following conditions:

$$\tau_{400}/\tau_{550} \leq 0.08$$

$$\tau_{440}/\tau_{550} \geq 0.4$$

5 where τ_{400} is a transmittance of the optical member or optical thin
film at the wavelength $400nm$, τ_{440} is a transmittance of the optical
member or optical thin film at the wavelength $440nm$, and τ_{550} is
a transmittance of the optical member or optical thin film at the
wavelength $550nm$.

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16. A zoom lens according to claim 1, wherein the zoom lens
forms an object image on an electronic image pickup element
arranged on the image surface, has at least one optical lowpass
filter, and satisfies the following conditions:

5 when $a < 4\mu m$, $0.08a < t_{LPP} < 0.16a$

 when $a < 3\mu m$, $0.075a < t_{LPP} < 0.15a$

where a , in micrometers, is a horizontal pixel pitch of the
electronic image pickup element, and t_{LPP} , in millimeters, is a
thickness of a thickest optical lowpass filter having one crystal
axis that forms an angle with the optical axis of the zoom lens
10 in a range from 35 deg. to 55 deg., as measured along the optical
axis.

17. A zoom lens according to claim 3, wherein the third lens
unit has a fixedly positioned lens component and a shifting lens
component in a magnification change from a wide-angle end to a
telephoto end.

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18. A zoom lens according to claim 1, wherein the optical
element is a prism.